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THE NAVY'S UNIVERSITY

The Graduate

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Winter 1997

RADM Evans named interim head of Marshall Center

by JO2 Davy Jones

The Defense Department has appointed NPS Superintendent RADM Marsha Evans as the interim director of the George C. Marshall European Center for Security Studies in Garmisch, Germany. The position is in addition to Evans' regular duties as head of the Naval Postgraduate School. She replaced former director Dr. Alvin Berstein, who accepted a teaching position at the National Defense University in Washington D.C.

Evans reported as interim director of the center in mid-November 1996. She is currently splitting her time between the two campuses, taking full advantage of Internet email and the electronic teleconferencing capabilities of both sites to enable her to continue "virtual" administration of her disparate commands.

NPS Superintendant RADM Marsha Evans

"We're on the leading edge in research into these systems," she said. "It's exciting to be forced into the future world."

Founded in June 1993 to help stabilize post-Cold War Europe by providing instruction to senior European defense officials, the Marshall Center's mission is to extend democratic principles and institutions to former Warsaw Pact countries and Soviet republics.

The center was the object last spring of a series of critical articles by European Stars & Stripes reporters Ed Reavis and Bill Sammon.

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Army secretary says military professionalism 'key'

by LCDR Sheri Smith

In the next century, "military planners must be ready to respond globally and make decisions within hours—or less." So said Secretary of the Army Togo West during a January visit to the Naval Postgraduate School.

In discussing the changing Army's future role, West noted that dialogues between military professionals may be just as important as exchanges between diplomats in preventing future conflicts.

"Military officers of all nations have a common interest in a world free from violence, the belief that they represent free peoples, and the desire for a true, just and lasting global peace," he said.

West spoke of the changed world the end of the Cold War has brought about, in particular the reduced threat of global conflict. He praised the efforts of nations now concentrating their efforts on conflict prevention within regions and among ethnic, religious and national groups.

The secretary cited partnerships between European nations and the United States as key factors in conflict prevention. Efforts by NATO and the Partnership for Peace were specifically lauded, as were efforts to prevent the proliferation of weapons of mass destruction—nuclear, biological and chemical—by dismantling and securing existing weapons, and by independent monitoring.

Still, the United States, he said, "has not yet retreated from an Army that is forward-based, as part of a conscious national policy."

When developing projections and policies for future conflicts, West said, planners must factor in the lessons learned from the Gulf War and rapidly changing technological advances. In preventing such conflicts, dialogues between respected professionals, civilian and military, will be key.

Highlights...

Former Defense Secretary Perry outlines acquisition reform

by JO2 Davy Jones

Then-Secretary of Defense William Perry visited the Naval Postgraduate School Dec. 3, 1996, on the way back from a whirlwind tour of Europe, the Middle East and Asia, to give a Superintendent's Guest Lecture. The address was also the keynote speech for the American Institute for Aeronautics and Astronautics Missile Sciences Conference.

"I can report to you that it's a dangerous world out there," Perry announced, referring to his recent trip. "Everywhere I went, I saw our troops faced with difficult missions.

"I believe we must transform the way we do business in the Pentagon...and reap the benefits of better technology and equipment for our troops."

"I can also report to you, without any question, that we have the best military forces in the world, and our troops prove that every day," he added.

"But to sustain this superb performance, we must also modernize our forces," Perry continued. "That is the challenge we are just beginning to meet."

Throughout the Cold War, Perry said, the U.S. devised a strategy of technology, tactics and training to "offset" the numerical superiority of the Soviet Union.

Although America aever had to put its forces to the test against the Soviets, the military was brought to bear against Iraq during Operation Desert Storm.

"As a result of the development of the 'three R's,'" Perry explained, "we had a new level of combat capability that I like to call 'force dominance.'

"During Desert Storm, for example, we did not merely have air superiority: our air forces dominated the skies," he continued. "This caused the Iraqi air force to sit out the war, following a few disastrous engagements with the coalition, and allowed strike aircraft to operate with impunity, devastating Iraqi ground forces at will.

"The question facing the Department of Defense today is, how can we sustain force dominance into the next century," Perry said. "First and foremost, we know we must continue to have well-0trained and highly-ready forces. But we also require an extensive, and expensive, modernization program."

With the planned flat defense budget of the next five years, DoD must find ways of diverting funds to the modernization of our forces.

"I believe we must transform the way we do business in the Pentagon," Perry said. "We must dramatically improve our efficiency, so that more is spent on modernization and readiness, and less on overhead." He added that transforming the acquisition process is the "lynch pin" to that strategy.

In describing current efforts in this direction, the secretary cited the Joint Direct Attack Munitions System (JDAMS), one of six acquisition reform pilot programs. JDAMS is a system that essentially converts a bomb into a "smart" bomb, by adding a GPS receiver and a guidance control system.

"Under the old system...conversion kits were going to cost $42,000 per bomb," Perry said. "Using the new acquisition system, which permits the program manager to use commercial standards, technology and buying processes, the conversion kits are costing us $14,000 per bomb. This particular program will result in a savings of $3 billion dollars, which can be applied to other modernization programs."

But acquisition reform goes beyond saving money, Perry added. "In the long run, it will give us better and faster access to modern technology, particularly the new generations of computer and communication hardware and software.

"This technology is developing at a breathtaking pace, but it is in the commercial marketplace," Perry said. "In the past, our procurement processes put up barriers to defense contractors accessing commercial components." These barriers have prevented DoD from using the rapidly advancing technology.

The secretary closed his comments with a quote from former British Prime Minister Winston Churchill.

"Churchill said, 'Men occasionally stumble over the truth. But most pick themselves up, and hurry away, without being affected by it,'" Perry noted.

"Now that we have stumbled over the truth, we must not hurry away," he concluded. "We must stay the course; we must reap the benefits of better government for our taxpayers, and better equipment for our troops."

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Marshall Center

Allegations centered around lack of student accountability, lack of ability of some students to speak any of the three core languages used at the center (English, German and Russian), accusations of favoritism in faculty hiring, anti-Semitism by some of the faculty, and financial irregularities.

While Evans does not view herself as a "troubleshooter" for the Navy, her academic background (a master's degree from Tufts University's Fltcher School of Law and Diplomacy plus several assignments at the U.S. Naval Academy), experience running the Naval Postgraduate School, and knowledge of German helped single her out for the position.

A search committee formed to select a new director of the Marshall Center is expected to provide recommendations for the position in the not-too-distant future.

From the President:

Here it is 1997 already...only three years until the Navy of the 21st Century is a reality. A belated New Year greeting to all of you from the Naval Postgraduate School Alumni Association staff. We hope this new year will be one of happiness, good health, and safe, successful military missions for each and every one of you.

I have much exciting and interesting news for all NPS alumni/alumnae, and for that matter for all professional military officers. The NPS Foundation has spent the last several years trying to make an all volunteer-run Alumni Association work. Experience has shown that while the need and interest is present, the practical and fiscal hurdles to having a healthy organizational structure made it virtually impossible to continue our efforts with just volunteer labor. In June of last year, these lessons learned were brought to the attention of the school's Executive Board. Several weeks of discussion resulted in the Superintendent's decision to establish and fund an Alumni Relations Office. This is a great step forward toward establishing effective connectivity between the school and its graduates!

The Alumni Relations Office (ARO) concept is in its infancy. However, at the present time it is clear that the ARO will report to the Public Affairs Officer. The ARO efforts will not be accomplished through a dues-paying membership, in contrast to the previous NPS Alumni Association membership. The mission of the office will be to initiate contact with all NPS alumni and establish a close link with them. An initial task will be to obtain mailing addresses of all NPS alumni/alumnae and actively update the information. This creation of an accurate and dynamic NPS graduate database has been needed for years. The office will also organize regional meetings in geographic concentrations of NPS graduates. The timeline for this office being up and operating is mid-1997.

The mission of the ARO will be to initiate contact with all NPS alumni/alumnae and establish a close link with them.

The NPS Foundation is exploring the feasibility of publishing a professional journal designed to enhance communications between the school, its graduates, the government, and civilian industry.

Over the next six months, the activities of the existing NPS Alumni Association will wind down, yielding to the efforts of the new NPS Alumni Relations Office. Life members will be refunded their membership dues, and we fully intend to work closely with the school to ensure that current Alumni Association records are transferred to the Alumni Relations Office.

Another exciting development is the NPS Foundation's plans to explore the feasibility of creating and publishing a professional journal publication for the benefit of NPS and its graduates. The Naval Postgraduate School produces graduates and research quite literally on a world class level.

The proposed publication would highlight these efforts and could become a focal point for faculty, staff and alumni/alumnae communications and information exchange. It could also serve as a quality vehicle in which the school's faculty could expound and advertise their research as well as new technologies being developed at NPS.

This feasibility study represents an unexploited opportunity for the NPS Foundation to potentially develop revenue of significant benefit to the school. It would also provide a valuable service to our alma mater as it navigates the next few years as the Navy's and the Department of Defense's premier graduate educational institution and leads us toward the irrepressible changes awaiting in the 21st Century.

If you have any comments or questions about these exciting new developments, please feel free to e-mail me at <foundation@nps.navy.mil>, or send a fax to the NPS Foundation at 408/656-3757. I would like to assure all of those NPS graduates who have faithfully supported our previous fledging efforts on your behalf, that you will not be forgotten. My best to all of you in the year ahead and a personal thanks from the staff of the NPS Alumni Association for your unflagging faith and support.

Gary Iversen

Gary K. Iversen, Captain, USN (Ret)
President, NPSAA ('80, CSM)

To order a Naval Postgraduate School class ring, contact

Josten's: 1-800-433-5671

To order a 1994 NPS Alumni Directory, contact

Harris Publishing: 1-800-877-6554

NPS Foundation's vital services

by Barbara Honegger

What single organization provides laboratory equipment, computers, academic awards and graduate fellowships for students; research awards and support, teaching recognition and an academic chair for faculty; and funds for the library, museum, Alumni Association, La Mesa School, Visiting Speakers Program, Leadership Lecture Series, Morale Welfare and Recreation, physical fitness programs and special events like Discovery Day?

Though you might think the answer is the Naval Postgraduate School itself, it's not. All this support, and more, comes from a quiet hub of activity just off the main entrance to Herrmann Hall—the NPS Foundation.

Founded in 1970 for the specific purpose of providing support to the Naval Postgraduate School from private sources, both individual and corporate, the Foundation receives and administers financial and property donations, and is a nonprofit charitable organization under state and federal tax codes.

"It all started with Robert Allan and his love of sailing," said Mrs. Marilyn Olson, President of the Foundation's Board of Trustees. "Since his days at Annapolis, he'd had a long-time interest in small boat sailing, and he decided to donate the *Harriet* to NPS. Through his association with Cornelius Shields (after whom boats of the Shields class are named), Allan acquired and donated other boats to the school. To enable these gifts to be made legally, he spearheaded the establishment of the NPS Foundation."

Allan was elected the first President of the Foundation's Board of Trustees in 1970, and served in that capacity for nearly a decade and a half, until 1984. He was followed by Dr. Clifford Keene, who held the position until 1986. In November of that year, Mrs. Jane Butler was elected as President, and served until November of 1986. Subsequently, retired Vice Adm Richard A. Miller, a World War II veteran, held the position until Olson became President in 1996.

"There is so much that we do, and much of it is seemingly invisible to the students. We take pride that every penny donated to the Foundation is returned to the school," Olson said. "It's important that individuals and corporations know we're here, and that donations of both funds and property to NPS through the Foundation are charitable contributions."

The NPS Foundation is exploring the creation of a serious professional journal designed to support and enhance communications and technology transfer between the school, its students and graduates—both US and international—and the federal government and civilian industry (see story, pg 3).

Besides sailboats, other gifts to the Navy's University which the Foundation has handled include furniture, artwork and antiques now located in the Superintendent's Dining Room and the Quarterdeck Lobby, NPS Museum memorabilia, and plants and benches for the Arizona Garden.

Seaman-to-Admiral Program

by LCDR Sheri Smith

The Seaman-to-Admiral Program pioneered by the late ADM Jeremy "Mike" Boorda is alive and well at the Naval Postgraduate School. CDR S. Aly, Deputy Dean of Students and a member of the Seaman-to-Admiral Planning Committee says the first students will report in June 1997.

"We are in the process right now of finalizing what majors we will offer to the incoming students," Aly said. "We had to create a whole new baccalaureate program, which is based on the bachelor's degree programs the school offered from the mid-1960s until 1974.

"We are also reviewing and reformatting existing undergraduate and refresher training courses to meet the needs of these students," she noted. "And in addition, we have agreements with California State University at Monterey Bay, the Monterey Peninsula College, and the University of California at Santa Cruz to provide the students undergraduate courses not offered at NPS."

Most students will work toward a bachelor of science degree, with at least one bachelor of arts degree in National Security Affairs planned. According to Ted Calhoon, NPS Director of Admissions, each student will have an individual program tailored to his/her needs. Because NPS is a year-round program, students should be able to complete their degree program in two to three years, depending on their academic background.

"From a professional perspective, these folks are incredibly impressive...we are fortunate to have them in the Fleet."

Calhoon has personally reviewed the record of each incoming student. "From a professional perspective, these folks are incredibly impressive—they are obviously top performers who have achieved notable records as young sailors. We're fortunate to have them in the Fleet."

Candidates for the Seaman-to-Admiral Program are enlisted sailors who excel in the demanding and highly competitive selection process. They are admitted to Officer Candidate School, commissioned as Ensigns, and assigned to a tour of active duty.

"When that tour of duty is complete, they will come to NPS," said Aly. "The initial group of students is expected to be three or less, and as of now, all of them are Navy Seals, because that group will complete its active duty tour requirement first. The bulk of the students will not start arriving until June 1998."

The Seaman-to-Admiral undergraduate students will not go through NSP as a group; rather they will be assigned to the school on an individual basis, and will be indistinguishable from the other students at NPS.

CIRPAS research facility formed

by Professor Philip Durkee

The Office of Naval Research (ONR), the Naval Postgraduate School (NPS), and the California Institute of Technology (CIT) have come together in the establishment of a joint research facility, the Center for Interdisciplinary Remotely Piloted Aircraft Studies (CIRPAS), to support scientific research and technology development. CIRPAS will develop the use of manned and remotly piloted platforms for unique operations that support atmospheric and oceanographic measurements.

Almost all measurement strategies envisioned for the remotely piloted aircraft (RPA) involve real-time control and interaction with instrumentation and on-scene decision making. An over-the-horizon communications capability is essential to support RPA operations. Remote communications will be conducted via an Internet link and remote log-in to CIRPAS from workstations and a mobile command vehicle.

The initial CIRPAS aircraft, dubbed Pelican, can be flown with a pilot on board, as well as remotely by a pilot on the ground. Pelican is a Cessna 337 Skymaster twin-engine, with the front engine eliminated and replaced with a smoothly faired payload structure compatible with NPS, CIT and NASA scientific payload packages. The aircraft is designed to carry more than 150 kg of scientific instruments for durations of up to eight hours with pilots on board, or up to 24 hours as a remotely piloted aircraft.

Two other RPAs will join the CIRPAS research facility. Under an agreement with the Department of Energy Atmospheric Radiation Measurements Program, CIRPAS will collaborate on the use of a General Atomics Altus, an RPA derived from the Predator UAV flying operationally in Bosnia. The Altus is expected to fly to 65,000 feet and stay aloft for two days while carrying a payload of 330 pounds. Finally, the Aerosonde, developed by the InSitu Group, will support high-resolution temperature, humidity, and wind observations. The Aerosonde has a six foot wingspan, and provides economic observations of complex meteorological phenomena.

CIRPAS is the first of its kind: a facility dedicated to the use of remotely piloted aircraft for scientific research. The center is also workingwith the NASA Environmental Research Aircraft and Sensor Technology Program for platform and instrument development, including satellite communications and testing of new sensor packages.

The CIRPAS Website can provide various forms of interaction with the scientific community. The site includes aircraft information, instrument development status, a general information venue to discus utilization of platform instruments, and aircraft technical descriptions. Selected users can monitor flight information, frame grab video, and incoming data, with more features and capabilities planned. Visit the site at:

http://www.met.nps.navy.mil/MAST/cirpas.html

Computer security research

by Dale Kuska

As the Department of Defense becomes increasingly dependent on computers, electronic information security becomes even more important. And with technology advancing so rapidly, protecting classified information from compromise becomes a significant challenge. Thus, students and professors in the NPS Computer Science department are diligently researching new ways to provide security for the latest in computer technology.

Developments in wireless technology which allow laptop computers in the field to connect to networks raise serious questions about security. The encryption card known as Fortezza, developed by the National Security Agency, is currently being tested for effectiveness by students working with Prof. Cynthia Irvine.

Computer Science students LTs Dion Robb, John English and Jim Downey (left to right) perform experiments on the effectiveness of the Fortezza Card, a recent breakthrough in laptop security.

The Center for Information Systems Security Studies and Research (CISR) is looking into many areas of the security problem. "The focus of my research group is in multi-level security, but there are several areas undergoing investigation," said Irvine. "For example, Professor Neil Rowe is interested in intrusion detection, and he has a couple of students working on detecting when someone has come into your system and then prohibiting them from doing harm."

The computer language "Java," which has gained popularity in World Wide Web programming, also has security issues involved with it. "A lot of attention is being focused on security flaws in the Java environment. There's a real danger that while you're surfing through the internet, you could easily download malicious or virus-like software into your system. Professor Dennis Volpano is researching this. These studies are important so that we can prevent DoD systems from being damaged," Irvine explained.

NPS professors develop 'virtual' curriculum

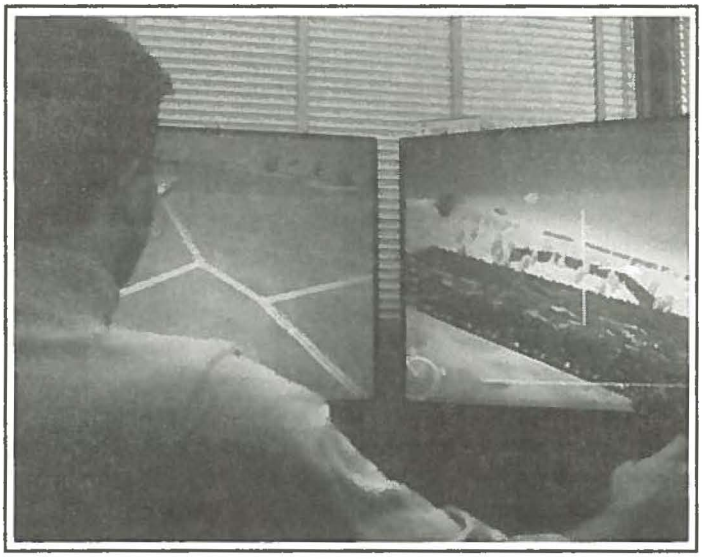
by Dale Kuska

A soldier in green fatigues creeps silently around the corner of a nearly destroyed building. Senses tuned, he peers down rows of structures riddled with bullet holes, searching for that elusive sniper he knows is there, somewhere. Across the room, a sailor reacts quickly to fire creeping along the inner walls of her ship. She arms herself with a fire hose and begins to extinguish the flames. Sounds strange? Not if you're in the Naval Postgraduate School's NPSNET virtual reality lab.

Virtual reality technology has an ever-expanding role in life-like battlefield and training simulations for the military, and NPS is responding through the establishment of the new Modeling, Virtual Environments and Simulation (MOVES) Curriculum.

"We have a responsibility here to graduate officers who can provide fundamental engineering and science knowledge to the military throughout their careers," said Computer Science Professor Mike Zyda.

"The big focus on virtual environments for the military has been using high-speed computers and technology to put a soldier inside a virtual battlefield so that he can rehearse operations ahead of time," he explained. "Or maybe he can practice on a previously recorded battle, so he can see what went right and what went wrong.



An NPS student takes a "flight" on the NPSNET

"Essentially you can use virtual environments instead of going out into the field and using large amounts of fuel and energy, and tearing up the countryside," Zyda continued. "The goal behind using virtual environments is to replace some of the field training. It will never replace it all, of course."

Professor Don Brutzman agreed, saying, "We want to do work with these students that we think is really important to the Defense Department, and has a sharper focus on this technology than existing curricula in this area."

And the Navy certainly seems to agree. "We're working with the Navy on creating an entirely new officer subspecialty that will require this degree. We don't have all the approvals yet, but we are making continued progress," Zyda said. "When the new subspecialty is approved, and put in the Navy's quota system, I believe by September 1997, we should have a steady stream of students."

Zyda says NPS faculty have searched through the Navy, looking for billets that should require this degree, and have discovered about 40 of them so far.

The curriculum was designed to combine two areas of study that NPS has taught for years. "The idea for the MOVES curriculum came up about three years ago. The Computer Science department has had a very successful master's program over the years. We've had students taking a specialization five-course track in computer graphics and simulation, and have had great success through the graduates of that program. But what happened was, the sponsors of our research and senior military officers would say, 'this is a great program, if only these students had the mathematical modeling skills to go with the computer simulation skills.'" Zyda explained.

So he and other faculty formed an executive committee which combined necessary courses from the Computer Science department along with human factors and modeling courses from the Operations Analysis curriculum, and designed what Zyda calls a "rugged" two-year master's in Modeling, Virtual Environments and Simulation. And by incorporating courses that already exist, the committee saved time and money.

"What we did was look at what courses were essential in both the Computer Science and Operations Research departments for this curriculum. What we offered the provost was a new program created with courses already taught by existing faculty. It's essentially a free curriculum," Zyda said.

While NPS has been actively involved in virtual environment research for the past decade, Zyda says the door remains wide open for future developments and thesis research in this budding technology. "We're 10 years down the research road in virtual environments and there's still more software technology we don't know how to do. There's still some large-scale networking we don't know how to do," Zyda said. "And we're going to continue to chip away at that and build prototype systems to show the military what we can do with this technology today."

Institute for Joint Warfare steps closer to reality

by Barbara Honegger

With the end of the Cold War, the passage of the Goldwater-Nichols Act, and sustained downward pressure on the U.S. defense budget, Congress has increased its focus on "jointness" in the military services—command and organizational changes designed to better integrate our national forces and technologies in joint (multi-service) operations. The major thrust of Goldwater-Nichols was to restructure military command and control and to increase emphasis on the role of the CINCs, or regional commanders, as opposed to the individual services.

As part of this thrust, in 1994 Congress mandated and funded a new program in joint technical/analytical skills studies at NPS. The program was to be aimed at identifying and providing the information and enhanced technical/analytical skills needed by junior operational officers, especially in the Office of the Joint Staff and the CINCs, but also in the fleet/services and support organizations as well.

According to a 1996 Joint Staff study, officers in 26 identified billets on the Staff will need to know how to employ high-tech weapons, share multi-theater assets like AWACS and JSTARS, design joint networks for combat (friend or foe) identification and communications, and seamlessly plan and execute information warfare operations, among other operations emphasizing "jointness."

With the Congressional mandate and $1.5 million in funds for an initial period of two years, NPS responded by establishing the Institute for Joint Warfare Analysis (IJWA) under the direction of Professor Michael Sovereign.

"The people who really shaped the Institute—what it was going to be and do—were Mike Sovereign, CAPT George Connor, USN (Ret.), then-NPS Superintendent RADM Tom Mercer, and Dean Peter Purdue," according to Professor Wayne Hughes, author of a forthcoming IJWA publication, "A Concise Theory of Combat," to be released later this year.

"The purpose of the Institute is to foster and integrate Joint Warfare research efforts at NPS, and to develop a broad-based interdisciplinary curriculum to give junior officers the technical and analytical skills they'll need to support joint operations," Sovereign said.

"So far, our main emphasis has been to refocus research here at NPS towards joint warfare: to identify, foster and fund new research efforts with an interdisciplinary and joint focus; and to design a new curriculum in Joint Warfare Analysis—which is still under development," Sovereign added.

In addition to being the IJWA Director, Soveerign is also a member of the Joint Modeling and Simulation Requirements Group, which meets periodically to review and make large-scale decisions on requirements and procurement for the new Joint Warfare Simulation (JWARS) for the Secretary of Defense. JWARS, in turn, is mandated by the Joint Requirements Oversight Council, created by the Goldwater-Nichols Act.

JTLS theses completed

by JO2 Davy Jones

Seven operations research students have completed their task of improving the Joint Theater Level Simulation (JTLS), a CINC-level computer model used in joint-training exercises. In September, they handed their project over to two Navy lieutenants who will attempt to integrate the separate theses into a single program and user's manual that CINCs can access in real time during a simulation, according to Professor Sam Parry.

"They took a Desert Storm-derived scenario, and beefed it up to cover all of the areas being worked on," Parry explained. "Initial tests at Roland & Associates were extremely successful."

The goal of the students' research was to establish links between strategic, operational and tactical task levels, and links between each command level to measure their effectiveness, and "assure an audit trail exists to determine causal reasons for critical events during a computer-aided exercise," according to the program's technical summary.

Students design arsenal ship

by Dale Kuska

For students in the Total Ships Systems Engineering (TSEE) program, months of hard work came to a close in January when they sent their capstone arsenal ship design project to Assistant Secretary of the Navy for Research, Development and Acquisition John Douglass.

Challenged by Secretary Douglass in April 1996 to come up with a concept and preliminary ship design incorporating the students' Navy knowledge and experience, the team had only six months to complete a project to be used in the procurement determination of a fleet of six $550 million ships.

The student team was tasked to design the arsenal ship using the same demanding list of requirements the Navy sent to private ship design corporations. One of the goals for the design was to enable a crew of 50 to operate it. "The standard number of personnel on a ship this size would be on the order of 500," team member LT Gary Null said. "Therefore, you can see our design had to go against current naval customs and traditions, and use advanced technology in all areas."

Focus on Faculty

Yost is Senior Fellow

The United States Institute of Peace in Washington, D.C. has named Professor David Yost of the NPS Department of National Security Affairs a 1996-97 Senior Fellow. Established in 1984, the Institute of Peace is "an independent, nonpartisan federal institution created and funded by Congress to strengthen the nation's capacity to promote the peaceful resolution of international conflict."

The Institute's Jennings Randolph Program for International Peace awards Senior Fellowships "to enable outstanding members of the academic, policymaking, journalistic, and other professional communities to conduct research and education projects on important issues concerning international conflict and peace."

Professor Yost will be in residence at the Institute from September 1996 to August 1997. His project, entitled "France and International Security," is intended to advance understanding of current and prospective changes in French international security policies.

These policies have intrinsic importance and exceptional utility as a reference point in comparative studies. One of the five permanent members of the UN Security Council and a nuclear weapons power, France has become (in terms of numbers of forces committed) the most active country in the world in UN peace-keeping operations. Moreover, France has been the world's third largest arms exporter for more than 20 years, and continues to play a significant role in African economic and security affairs.

According to Prof. Yost, the French case is significant because the security policy changes at hand promise to be more palpable and painful than in many other countries: they entail sacrificing principles and policies that have become linked to the French national self-image.

Associate Professor Richard Doyle, recipient of the Schieffelin Award

Top NPS faculty recognized

by JO2 Davy Jones

The 1996 Instructional Recognition Evening was held October 15 to honor those professors who exemplified the mission of NPS during the past year. NPS Superintendent RADM Marsha Evans opened the ceremony by saying, "We correctly call ourselves an institution of higher learning, one that anticipates the needs of the Defense Department. And the key to our success lies in our faculty. Their responsiveness and innovations keep us on the cutting edge...their initiative alone sets our faculty above their civilian counterparts." The honorees were:

Professor Raymond Shreeve, Aeronautics and Astronautics
Associate Professor Balasubramaniam Ramesh, C3 Academic Group
Associate Professor Debra Hensgen, Computer Science
Assistant Professor John Ciezki, Electrical & Computer Engineering
Professor Arthur Schoenstadt, Mathematics
Professor Alan Fox, Mechanical Engineering
Professor Robert Haney, Meteorology
Associate Professor Paul Stockton, National Security Affairs
Professor Roland Garwood, Oceanography
Professor Max Woods, Operations Research
Lecturer William Maier, Physics
Associate Professor David Henderson, Systems Management
Lieutenant Commander Michael Mclaughlin, Aviation Safety School
Assistant Professor James Felli, Defense Resources Management Institute
Associate Professor Douglas Fouts, Space Systems Academic Group
Associate Professor Donald Walters, Undersea Warfare Group

Assistant Professor Michael Ross was also honored with special recognition for Excellence in Course Design. Ross created a joint course with the Air Force Institute of Technology on a satellite design project wherein students from both institutions communicated with each other via the Internet.

The final event of the evening was the announcement of the Rear Admiral John Jay Schieffelin Annual Faculty Award for Excellence in Teaching. Associate Professor Richard Doyle of the Systems Management Department was the recipient.

Focus on Faculty

Distinguished Professors

The honorary title of Distinguished Professor is awarded to selected professors by the Superintendent of the Naval Postgraduate School. Candidates are nominated by their Chair, reviewed by a committee, prioritized by the Deans' Council, and recommended by the Provost.

Recipients are recognized as "senior statesmen" among their colleagues. Their careers are marked by continued effective service to the school and its faculty. Distinguished Professors have aided in the growth and enhanced the stature of NPS. Their research and scholarly contributions have had a significant impact in their area of specialization, and have contributed to the advancement of science and to solving real-time problems of the Department of Defense and the Navy.

While quality teaching and professional service are important considerations, research has typically played a vital role in the careers of the Distinguished Professors at NPS. What may not seem immediately apparent, however, is the truly unique relationship cultivated and sustained between the Navy's University, these exceptional faculty members, former and current students, and the future.

Current NPS Distinguished Professors, their department, and the year their title was awarded include:

Robert Ball, 1994, Aeronautics and Astronautics
Donald Gaver, 1982, Operations Research
Russell Elsberry, 1994, Meteorology
Peter Lewis, 1986, Operations Reserach
David Netzer, 1994, Aeronautics and Astronautics
Max Platzer, 1995, Aeronautics and Astronautics
Turgut Sarpkaya, 1975, Mechanical Engineering
David Schrady, 1995, Operations Research

Emeriti Distinguished Professors still active at NPS include:

Eugene Crittenden, Physics
Paul Marto, Mechanical Engineering
Robert Renard, Meteorology
Abe Sheingold, Electrical and Computer Engineering
George Thaler, Electrical and Computer Engineering

Post-Doctoral Associate Programs

The Naval Postgraduate School participates in two Post-Doctoral Programs, one sponsored by the National Research Council (NRC) and the other by the Office of Naval Research (ONR) and the American Society for Engineering Education (ASEE). There are nine post-docs on tenure at NPS, six with the NRC program and three with the ONR/ASEE program. Post-docs work toward their career goals while conducting directed research with NPS faculty. Current post-docs and their research projects include:

Dr. Kevin Jones (NRC) is researching unsteady aerodynamics and aeroelasticity. Dr. Jones has developed algorithms for time-domain computation of aeroelastic motions for single airfoils or systems of airfoils with wake interference effects. He has also developed a fast CFD algorithm with a user-friendly graphical interface, creating a "virtual wind tunnel" which is used as a teaching aid in several NPS courses.

Dr. Joseph Lai (NRC) is studying the dynamics of the wake of a plunging airfoil through laser doppler anemometry to develop numerical codes for prediction of this class of flows.

Dr. Martin Saunders (NRC) is continuing his work on use of quantitative electron diffraction techniques to measure the bonding charge distribution for a range of metallic materials and inter-metallic alloys.

Dr. Lan Yi (NRC) is using the Navy's numerical weather prediction model, NORAPS, to conduct a quantitative study of the water balance in the East Asian summer monsoon systems during onset and development stages.

Dr. Robert Pierce (NRC) is researching the nonlinear evolution of waves in coastal waters.

Dr. Sang Young Park (NRC) is considering the threats from the impact of a comet or asteroid through modeling and simulation of a space mission.

Dr. Doug Miller (ONR/ASEE) is investigating the structure of extratropical precipitation features as they make landfall using satellite, radar, and surface observations combined with numerical simulations from mesoscale models developed by the Navy and the National Center for Atmospheric Research.

Dr. Lawrence Bradford (ONR/ASEE) is investigating propagation of high-energy laser beams through the stratosphere.

Dr. Ralph Muehleisen (ONR/ASEE) is studying active control of thermoacoustic engines. When asked why he applied to study here Muehleisen remarked winningly, "NPS is one of the best places for acoustics west of Penn State."

Secure computing facility opens

by LT Gary Bishop

On October 1, 1996, the NPS/NAVAIR Survivability and Lethality Assessment Center (SLAC) opened for use by students, faculty and staff. The SLAC is a secure computing facility located on the fourth floor of Ingersoll Hall (yes, there really is a fourth floor!).

The purpose of the SLAC is to provide users with computer simulation software for modeling different aspects of survivability and lethality in battle. Students can use the SLAC's computer models to aid them in completing their theses by generating data for analysis or validating their own computer programs.

The SLAC has a panoply of computer platforms available for use: a VAX mainframe with multiple terminals, a Silicon Graphics IRIS Indigo, two SUN Workstations, several PCs, and two Macintosh computers. These platforms store the 15 software programs available in the facility. The programs, most of which are sponsored by the Joint Technical Coordinating Group on Aircraft Survivability, include:

--Air-to-Air System Performance Model (AASPEM) and Piloted Air Combat Analysis Model (PACAM), two programs which simulate many aspects of air-to-air warfare.

--Advanced Low Altitude Radar Model (ALARM) determines the detection performance of a ground based radar.

--Variable Airspeed Flight Path Generator (BLUEMAX III) simulates an aircraft flight path based upon user inputs and aircraft performance data.

--Computation of Vulnerable Area and Repair Time (COVART) calculates vulnerable areas and repair times for a single penetrator, such as a fragment or projectile.

--Fast Shotline Generator (FASTGEN): generates the shotline data required by COVART for a given target.

--Enhanced Surface-to-Air Missile Simulation (ESAMS) and Integrated Missile and Radar Simulation (IMARS), two programs which simulate aircraft/SAM engagements.

--Helicopter Piloted Air Combat Model (HELIPAC) simulates helicopter performance limits, flight dynamics, etc.

--RCS Computation Based on Physical Theory of Diffraction (McPTD) computes the high frequency radar cross section of a target.

Radar-Directed Gun Simulation (RADGUNS) simulates a one-on-one engagement between an aircraft and numerous AAA systems.

--Target Vulnerability Model (JSEM) simulates the effects of a proximity-fuzed detonation of a high explosive warhead.

--Trajectory Analysis Program (TRAP) simulates the flyout of a missile toward a maneuvering air target.

--Extended Air Defense Simulation (EADSIM) simulates multiple scenarios (over 1 million lines of code).

'Virtual Library' established

by JO1 Diane Jacobs

The Navy is bringing virtual reality to the library. Under a pilot program, three sites are testing what the Librarian of the Navy, Joan Buntzen, says will, "extend libraries to the desktop by providing users electronic access to remote sites for research."

Buntzen demonstrated the "virtual library" (VL) during a visit to the NPS Dudley Knox Library in January.

The virtual library offers eight categories to search for information: library catalogs, electronic journals, research reports and summaries, table of contents/current awareness, various databases, a "peer locator" compendium of other experts in a given field, and the NDVL homepage.

"It's a tree of Web pages connecting desktop users to a carefully-selected array of resources based on user requirements and source value," described Buntzen.

Joan Buntzen, librarian of the Navy, demonstrates the VL project

Sources of information are gained through a contract set up with the Logistics Management Institution, which created a similar interface for NASA in 1992.

The VL project gives users instant access to technical publications, research papers and other reference materials. Users can request personal copies of documents, which can be sent directly to their computers.

The virtual library is similar to the World Wide Web, but supplies an interpretive overlay to the Web, making searching for specific information easier.

One future consideration for NPS is to expand the VL to include student dissertations and research documents, making papers available to other users.

Phase II of theVL project will begin in June, with "de-bugging, enhancing the prototype, and beginning transition to the Navy and other servers," Buntzen said. "By the end of the first three phases, 120 end-users will be hooked up to the virtual library at no cost."

Wave research earns award

by JO2 Davy Jones

Since joining the Naval Postgraduate School faculty in 1993, Oceanography Department Professor Thomas Herbers has been focusing his research on how the cofiguration of a continental shelf affects waves, to better predict wave propagation for amphibious operations.

During the December 1996 commencement ceremonies, Herbers was honored for his efforts with the Carl and Jesse Menneken Annual Faculty Award for Excellence in Scientific Research, presented each year to a junior faculty member who has exhibited outstanding research in science and engineering.

"I didn't even realize the school was presenting the award this graduation," admitted Herbers, who was completely surprised by the announcement. "I'm very proud of that. It's a real honor for me," he said.

Professor Tom Herbers, whose research will help predict wave characteristics close to shore during amphibious operations

Herbers began his current research in 1994, using pressure recorders to measure waves along the continental shelf off the Outer Banks in North Carolina. He relies on intensive student involvement and thesis work to analyze the data gathered.

"We placed 10 sensors over a 100 kilometer stretch of shelf at a depth of up to 1,000 meters, and left them there for four months," he said. Sitting along the shelf floor, the sensors detect the change in pressure as a wave passes over head.

Herbers added that the topography of the continental shelf affects the size and shape of waves hitting a beach. In Monterey Bay, for example, "there is a canyon in the middle of the shelf floor. This topography deflects the waves coming in from the ocean, and focuses them in certain regions," he explained.

Herbers' ultimate goal is to accurately predict the wave condition on a beach, given the wave condition in the open ocean. "The potential difference of wave characteristics along a shoreline is very important for amphibious operations," he said. "We want to be able to improve the Navy's capability to predict these characteristics."

NPS uses Point Sur for research

by LCDR Sheri Smith

While the Naval Postgraduate School has had the responsibility to oversee and maintain the physical plant of the former Point Sur Naval Facility for several years now, the research capabilities of the site have not been able to be exploited until the Navy reached a decision on what to do with Point Sur's hydrophone array.

Last spring, the decision was made to declassify one hydrophone of the 30 in the 25-mile long array, and to retain the other 29 for classified purposes. The decommissioned command's buildings were then turned over to NPS to become the Coastal Ocean Acoustics Center.

Oceanography Professor Ching-Sang Chiu is the director of the center. "It's really a national treasure," he said. "We are using the facility to maintain an 'ear on the ocean.'"

A consortium of research institutions are currently using the facility, including:

--the Center for Monitoring Research of the Science Applications International Corporation, validating compliance with the Nuclear Test Ban Treaty;

--Cornell University's Bioacoustics Research Program, monitoring a sound generator off Half Moon Bay as part of the Acoustic Thermometry of Ocean Climate project;

--Monterey Bay Aquarium Research Institute, gathering and analyzing biologic and seismic acoustic event data;

--NPS's Oceanography Department, conducting a two-year study of coastal circulation, including currents, upwelling and heat content of thermoclines;

--NPS's Meteorology Department, analyzing air movement and temperature differentials at the site;

--Scripps Institution of Oceanography, monitoring major storms and seismic events; and

--the University of Washington's Applied Physics Laboratory, researching coastal sound levels.

The Coastal Ocean Acoustics Center is an unmanned facility, with data relayed via modem to NPS and other consortium members. "The center will continue in an unmanned status, although we have been repairing the facility as needed, and additional improvements are planned," said Chiu. "Currently, the datalink is unclassified only, and plans include installing an encrypted datalink modem to provide greater access to the sensor information."

Several NPS students are pursuing theses studies using data obtained from the hydrophone array, Chiu noted. In addition, a project using multiple hydrophones in the array to track whales is planned for the near future.

For additional information on the center's projects, visit the Coastal Ocean Acoustics Center Website at:

http://www.usw.nps.navy.mil/ptsur.html

Vice President Gore invites NPS grad to address int'l conference

by Dale Kuska

When recently graduated NPS student CDR Ken Campbell looked through his mail on Dec. 15, he didn't pay much attention to the envelope with the vice president's seal on it.

"I almost threw the letter in the trash bin. I looked at the seal and figured it was just a political advertisement. I had to read the letter over a couple of times for it to settle in," Campbell said.

That's because it was actually a personal letter from Vice President Al Gore inviting Campbell to be a speaker at the International Conference on Aviation Safety and Security in the 21st Century, held in Washington, D.C., Jan. 13-15.

"The conference is essentially designed to get people who are in the business of antiterrorism and aviation safety together and try to come up with better means to provide safe, secure air transportation for the commercial sector," Campbell said.

After spending two years researching terrorism as a student in the Special Operations curriculum, Campbell was asked to discuss just one element of the overall terrorist picture.

"What I will be addressing is the terrorist cults," he explained. "Specifically, I will discuss the leadership you find in the terrorist culture, the authoritaian mentality. I'll also be discussing how that mentality translates in terms of a group's potential for committing events causing mass destruction and casualties."

Campbell was recommended to speak by Dr. Gerald Post, chairman of the Political Psychology Department at George Washington University, which cosponsored the conference.

"It certainly is an honor to be considered 'expert' enough to be invited to address what should be a very distinguished group of individuals," Campbell said. "It reaffirms that I have accomplished something worthwhile during my time here at NPS. Besides, it's not every day one receives an invitation to speak from the Vice President of the United States."

'Top Ten' Thesis Stories of 1996

by JO2 Davy Jones and Dale Kuska

The Naval Postgraduate School has always been driven by the efforts and accomplishments of its students. 1996 was no exception, as 754 officers and civilians from all U.S. services and more than 40 allied countries graduated with master's and doctorate degrees from the Navy's University.

The Public Affairs Office staff compiled this list of the "Top 10" thesis-related stories of the past year:

Marine aims to improve night vision. Ops Research student Cpt Matt Sampson, USMC, helped relocate the cutting edge in night vision technology through research on fusing infrared and night vision bands of information, capitalizing on the strengths of each.

Students look for new applications for laser. Physics Professor Andres Larraza thought it would be possible to "tune" a laser, usually limited to a single color, to a variety of different colors. The concept has far-reaching applications, both military and commercial, and five thesis projects are planned to bring Larraza's ideas to reality. Two theses have been completed.

Students work to improve training simulations. Seven Ops Research students have worked to improve the Joint Theater Level Simulation computer model (see article pg 7).

Void research could save millions. LT Mark Thornell, Ops Research, continued thesis studies from past students on the maintenance of tanks and voids aboard ships. Shipboard tests of the Tank and Void Database tracking system indicate a potential savings in excess of $12 million for carriers alone.

Team shines laser for sensor research. Optical properties of lasers in developing a more accurate picture of the shoreline environment was the thesis topic of Meteorology student LCDR Robert Kiser, aided by other students and NPS professors.

Planning humanitarian operations made easier. LT Donna Sullivan developed a computer program, dubbed the Humanitarian Operations Planning System, to predict the quantity of supplies needed to support a population in a humanitarian effort. HOPS is being integrated into the planning doctrines of commands worldwide, and the US Army is adding it to the Joint Logistics Electronic Battlebook.

Rail gun would meet varied mission needs. LCDR Fred Beach developed and researched a new possible direction for future naval and field guns: variable lethality. The rail gun uses electrical current to fire a projectile.

Student, professor participate in CIWS upgrade. LCDR James Schmidt and his thesis advisor, Physics Professor Steve Baker, had a hand in the effort to improve the Phalanx Close-In Weapon System. Schmidt's studies centered around the testing and analysis of the forward-looking infrared camera upgrade, designed to aim the CIWS during manual firing.

NPS team assists SC21 program. Electrical and Computer Engineering Professor John Ciezki and a group of students designed a simulator for the "zonal electric distribution" system for the Surface Combatant 21 program. The team is running experiments to determine the optimal configuration of the SC21's power distribution components to ensure maximum ship stability/survivability in battle.

Around Campus

Museum overhauled

by LCDR Sheri Smith

Where else can you find prohibition hooch bottles and a circa 1880's gown side by side with a portrait of the Great White Fleet and the latest developments in fiber optic research? Located in the basement of Herrmann Hall, the Naval Postgraduate School Museum has been undergoing extensive renovations to improve and expand its displays.

"We are attempting to create a space which represents both the Hotel Del Monte and the Naval Postgraduate School, and more effectively orients the visitor in the context of time and place," said Mr. John Sanders, deputy public affairs officer for the school. "The conceptual layout includes interactive displays, visual aids and a timeline in the museum itself, coupled with a completely revised and expanded self-guided tour booklet to the campus."

The best of the school's Hotel Del Monte artifacts are on display, and new items turn up in the oddest places. The teletype operator's high swivel chair was found in a pile of derelict furniture in the back of the Student Guardmail Center. A set of menus with engravings by Jo Mora was donated by a Pacific Grove resident who discovered them tucked behind the water heater in his house. A college student found a number of pieces of Del Monte china in an antique shop, and offered them to the NPS Foundation for the same price he'd paid for them because the settings "belonged in the museum."

Memorabilia from the school's Annapolis years are on display, as are relics from the Del Monte's days as a pre-flight training facility during World War II. NPS alumni are encouraged to contact Sanders if they have items of historical significance which might be appropriate for display.

The NPS Museum is open to visitors on weekdays from 8 AM to 4 PM.

NSA-MB formed

The Directorate of Military Operations at NPS became Naval Support Activity–Monterey Bay last fall, taking on new responsibilities in regional support.

Captain Mary Jayne Meyer took command of the activity. NSA–MB will manage public works, firefighting, security, administrative and supply department support for the Naval Postgraduate School.

FSC relocates

The NPS Family Service Center has left its overcrowded spaces in the basement of Herrmann Hall for a larger facility at La Mesa Village.

The new facility offers expanded room for classes, computers linked to educational opportunities and job databases, and base housing availability lists anywhere in the country. Relocation assistance, financial management counseling, and retirement support services have also been increased.

Discovery Day

The sixth annual NPS Discovery Day in September brought record crowds. In all, an estimated 2,600 people from three counties took part in 35 activities designed to show that science can be fun.

Favorite events were the Awesome Nitrogen Cannon, the holograms, the Virtual Reality lab, NPS's PANSAT satellite, and the ever-popular Incredible, Edible Flying Cheeseball.

Rachel Galimba, 15, from Monterey High, summed it up by saying she not only learned a lot about science, but, "thanks to Discovery Day, now I know what I'm going to do for my science project for school."

Dunes get facelift

by JO2 Davy Jones

Thousands of people run, bike, walk or skate each day along the recreation trail in Monterey. Just down the trail from NPS, a Seabee-constructed boardwalk climbs the restored Del Monte Beach dunes to a spectacular view of Monterey Bay.

Only six years ago, the NPS dunes were in sad shape, covered with vast stretches of non-native ice plant which had forced out the native plants. A hard freeze in December 1990 killed much of the ice plant, and threatened to destabilize the dunes.

Frank Vogl, NSA–MB environmental manager, said that the school cooperated with the City of Monterey Parks and Recreation Department to restore the landscape.

The effort was not a simple one. "The Hotel Del Monte had used the dunes for a landfill," Vogl explained. "The Navy corrected the damage as best as possible, but much of the area is a mix of soil types—only about 25 percent is true dunes."

The goal was to create a self-sustaining eco-structure, which required a large diversity of plant life. Since work began, over 88,000 plants representing 50 species have been reintroduced to the dunes. This has had an additional positive effect on native endangered fauna.

"Since we reintroduced the coastal buckwheat, we've seen the return of the Smith's blue butterfly, whose larvae eat only the flowers of the plant," Vogl said. "The California black legless lizard, which uses dunes as its exclusive habitat, has also made a comeback here."

Vogl said that NPS continues to contribute about $20,000 annually to the project, which goes to both dune and boardwalk maintenance, and weed control. "This project takes a lot of money and manpower, more than we first realized," Vogl added. "But it is something to really be proud of."

NPS Alumni Class Notes

Steve Rinard, '64 Meteorology, is a Radar/Program Mgr with the National Weather Service, Southern Region Hdqts in Ft. Worth, TX. Steve was singled out from 105 applicants to serve as a member of the 1996 Olympic Weather Support Team.

CAPT Don Thompson (Ret), '76 CSM, was awarded a PhD in Management from California Coast University in December 1996. He and his wife, Gene, reside in New Orleans.

CAPT Robert Kayler, '80 MS, is CO of Naval Hospital, USMC Air Ground Combat Center, Twentynine Palms, CA.

Cheron Vail, '80 MS & '91 PhD Computer Sci, is with Aetna Health Plans as Western Region Technology Manager.

CDR Dennis Stokowski, '83 MS, is CO of the USS Moosbrugger, homeported in Mayport, FL. The ship recently participated in Unitas 37, and circumnavigated South America.

CDR Daniel M. Smith, '83 MSEE, is CO of the guided missile frigate USS Underwood, homeported in Mayport, FL.

CDR Donald Inbody, '84 MA, is CO of the amphibious transport dock USS Duluth, homeported in San Diego, CA.

CDR James T. Reilly, '85 Mech Engr, is CO of the attack submarine USS Pogy, which just concluded a deployment as part of the Arctic Submarine Science Cruise. In this second deployment of a five-year agreement to provide scientists greater access to the Arctic Ocean, several scientists sailed aboard the sub gathering information to increase navigational and environmental understanding of these chilly waters.

CDR William French, '86 MS, is CO of the attack submarine USS Salt Lake City. Homeported in San Diego as part of the USS Kitty Hawk Battle Group, the sub is currently on a six-month deployment to the western Pacific Ocean.

CDR Paul Schuh,'86 C3, is assigned to the N64 office of the Joint Staff. He and his wife, Rita, an environmental engineer at the Naval Surface Warfare Center in Bethesda, announced the arrival of their first child, Margaret, in Jan '97

CDR Lesa McComas, '86 Ops Research, is XO of the NROTC unit at UC Berkeley, and Adjunct Associate Professor of Naval Science.

CAPT John Butler, '86 Engr Acoustics, recently ended four years as Design & Construction Mgr for the Seawolf Program Office. He is now Major Program Mgr, Strategic Submarine Program, and Head, Ship Acquisition Branch, Strategic Systems Program, NAVSEASYSCOM.

Army **Maj Jeffrey N. Williams**, '87 Aero Engr, was recently selected for NASA's astronaut program while attending the Naval War College. After graduation, Jeff will report to Johnson Space Center to train as a mission specialist.

CDR Cecil Haney, '87 Naval Engr, is CO of the attack submarine USS Honolulu, homeported in Pearl Harbor, HI.

LCDR Henry Zwartz, '87 Admin Sci, received the Joint Service Achievement Medal for his services as CTF 67 Liaison Officer, during execution of operational and humanitarian missions on a deployment in the former Yugoslavia.

CDR Ed Victoriano, '89 Admin Sci; MA, Nat'l Security & Strat Studies, Naval War College, is assigned to the Logistics Readiness Center, USCENTCOM.

LCDR Ted Janacek, '90 Weapons Engr, was selected as 1996 Officer Instructor of the Year at Naval Submarine School, Groton, CN.

CDR Linda Lewandowski, '91 C3, is CO of the ammunition ship USS Mount Baker, homeported in Charleston, SC. The ship recently completed a deployment as part of the USS George Washington Battle Group.

LCDR Charles F. Williams, '91 MA, is CO of the coastal patrol ship USS Firebolt, homeported in Little Creek, VA. The ship just completed its first deployment, having participated in several special ops exercises in the Mediterranean.

LT D. Scott Chapman, '92 MA, is CO of the coastal patrol ship USS Typhoon. The ship recently participated in Unitas 37, conducting gunnery ops, ASW ops, and EW C2 exercises while circumnavigating South America.

LT Drew Williams, '95 Aero Engr, is Air Warfare Officer at CVW-2, deploying aboard the USS Constellation in April.

Army War College Foundation Press

The Army War College Foundation Press is releasing its first two books in Spring 1997. The first is *Tale of Three Wars,* an insightful novel of the Viet Nam War by Major General Edward B. Atkeson. Written from the perspective of mid-level combatants, the novel probes their sharp distinctions and shared angst with power and candor. The second book is a new issue of Anton Myrer's classic novel of war and warriors, *Once an Eagle*. A moving and authentic epic, this book deals candidly with the moral dilemmas and career challenges facing the American military professional.

NPS/NPSAA Memorabilia

NPS License Plate Frames. $9.00 for one; $14.00 for two.

Naval Postgraduate School Ties. Navy blue with gold NPS shield, from Talbott. Silk, $25.00

Prices include shipping. Please make check out to NPS Foundation, and mail to: NPS Foundation, Memorabilia, P.O. Box 8626, Monterey, CA 93943-0626.

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PERSONAL DATA SHEET

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FULL NAME	
RANK & SERVICE	
SUFFIX (e.g., Ph.D., (Ret), M.D.)	
SSN (U.S. Only)	
COUNTRY (Internationals)	
ACTIVE DUTY or RETIRED?	
HOME ADDRESS If changed, check box ☐	
HOME PHONE	
HOME FAX	
TITLE or DEPT (e.g. Director, VP)	
WORK ADDRESS If changed, check box ☐	
WORK PHONE	
DSN	
WORK FAX	
PERMANENT ADDRESS	
EMAIL or INTERNET	
GRADUATION DATE (MM/YY)	
CURRICULUM	
NOTES AND ANNOUNCEMENTS (For Newsletter Publication)	

For more of these sheets call the NPS Alumni Association office at 408-656-4011

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